Monthly Report Explained

A page-by-page guide to reading your monthly performance report

What this report is. After each round closes, every laboratory that submitted results receives one report per lab number. It compares each of your results with the results of the other laboratories, tells you how far you were from the group (SDI and %Dev), and shows how you have performed over the last 12 rounds.

Where to find it. The report is released within a week of the closing day. It is emailed to you and appears in your portal under your reports. An SDI is only issued for results received before the sample close time.

How this guide is organised. The next pages show the real report, with numbered marks that match the notes. A report has a cover page, one summary page, one page for each analyte, a page with your SDI history, and a "How to read this report" page. In the examples a fictitious laboratory (Lab 10) is used; the figures are illustrative.

The report at a glance

Page 1	**Cover**	Your laboratory, this round at a glance, the contents, issue details and contact links.
Page 2	**Summary**	All your results of the round on one page: your result, the three comparator means, SDI, %Dev and TEa.
Pages 3 to 24	**One page per analyte**	Comparative statistics, where you stand among the labs, and your SDI and %Dev over the last 12 rounds.
Page 25	**SDI history**	Your SDI for every analyte over the last 12 rounds, with your running mean SDI (RMSDI).
Page 26	**How to read this report**	A short reminder of the definitions, charts and marks.

The three numbers that matter

|SDI| 2.0 or less
Acceptable

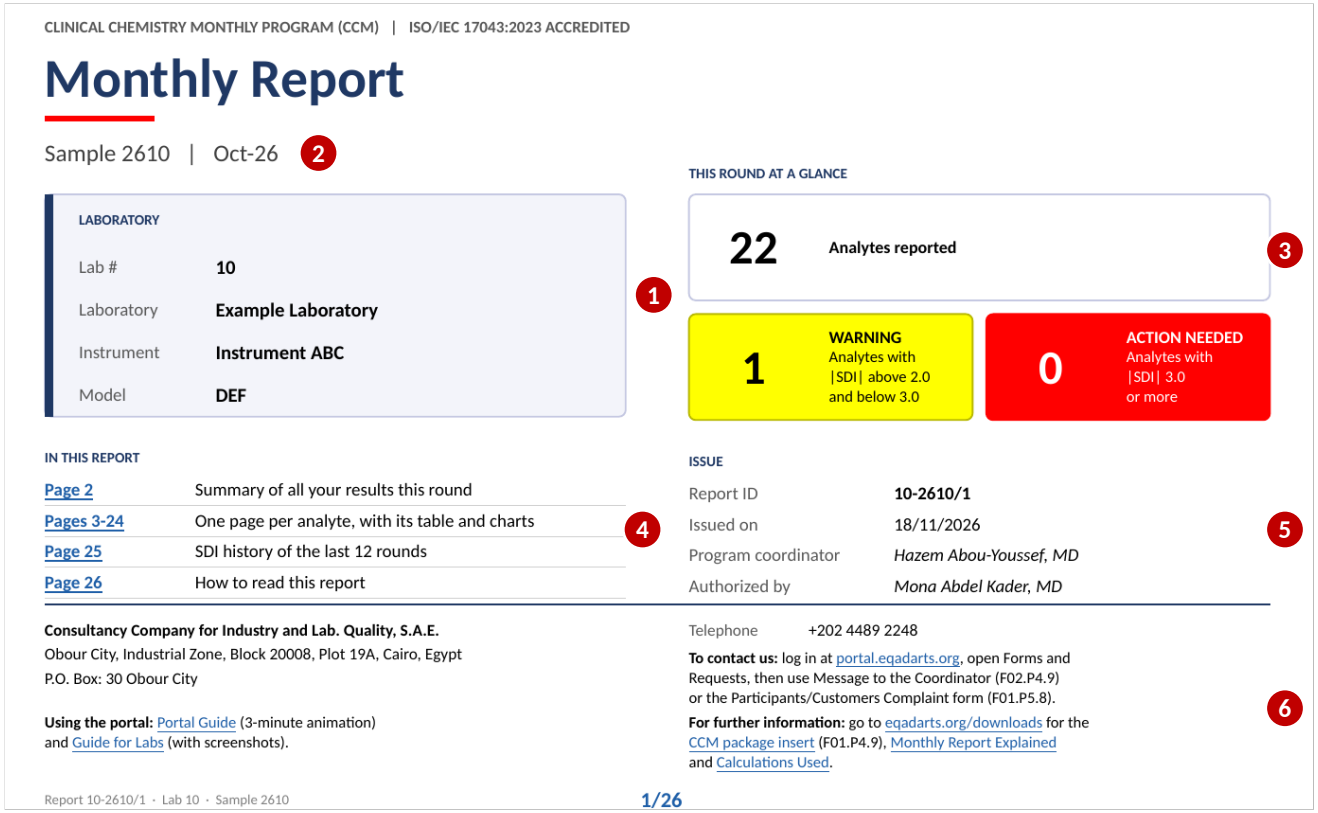
|SDI| above 2.0 and below 3.0
Warning, take a look

|SDI| 3.0 or more
Action needed, investigate

Need more detail? Calculations Used explains every formula; Guide for Labs (with screenshots) and the 3-minute Portal Guide explain the portal. To reach us: eqadarts.org/contact.

Page 1: the cover

Your laboratory, this round at a glance and where to find help



CLINICAL CHEMISTRY MONTHLY PROGRAM (CCM) | ISO/IEC 17043:2023 ACCREDITED

Monthly Report

Sample 2610 | Oct-26 (2)

LABORATORY (1)

Lab #	10
Laboratory	Example Laboratory
Instrument	Instrument ABC
Model	DEF

THIS ROUND AT A GLANCE (3)

22 Analytes reported

1 WARNING Analytes with |SDI| above 2.0 and below 3.0

0 ACTION NEEDED Analytes with |SDI| 3.0 or more

IN THIS REPORT (4)

Page 2	Summary of all your results this round
Pages 3-24	One page per analyte, with its table and charts
Page 25	SDI history of the last 12 rounds
Page 26	How to read this report

ISSUE (5)

Report ID	10-2610/1
Issued on	18/11/2026
Program coordinator	*Hazem Abou-Youssef, MD*
Authorized by	*Mona Abdel Kader, MD*

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To contact us: log in at portal.eqadarts.org, open Forms and Requests, then use Message to the Coordinator (F02.P4.9) or the Participants/Customers Complaint form (F01.P5.8).

Using the portal: Portal Guide (3-minute animation) and Guide for Labs (with screenshots).

For further information: go to eqadarts.org/downloads for the CCM package insert (F01.P4.9), Monthly Report Explained and Calculations Used. (6)

1. **Laboratory block.** Your lab number, laboratory name, instrument and model.
2. **Sample and date.** The round the report covers, for example sample 2610, October 2026.
3. **This round at a glance.** How many analytes you reported, and in the yellow (WARNING) and red (ACTION NEEDED) boxes how many of them had an |SDI| above 2.0 and below 3.0, and 3.0 or more.
4. **In this report.** A map of the pages. The page numbers are clickable and jump to that page.
5. **Issue.** The report ID, the date it was issued, the program coordinator and the person who authorised the report. Quote the Report ID when you write to us.
6. **Help and links.**

Page 2: the summary of all your results

One line per analyte (the first rows are shown). Click an analyte name in the PDF to jump to its page

Sample #	Date	Lab #	Lab name
2610	Oct-26	10	Example Laboratory

									Evaluation		Medical Eval.*	
Analyte	Unit	Method	Instrument	Your Result	Mean (All)	Mean (Method)	Mean (Peer)	Compa -rator	SDI	% Dev	TEa%	%Dev/TEa
Albumin	g/dL	BCG	Instrument ABC	3.8	3.72	3.73	3.84	Method	0.51	1.91%	3.31	0.58
ALP	U/L	pNPP AMP	Instrument ABC	82	78.56	78.69	83.57	Peer	-0.23	-1.88%	12.04	-0.16
ALT	U/L	ALT UV no P5P	Instrument ABC	48	46.57	46.62	48.80	Method	0.39	2.96%	18.47	0.16
AST	U/L	AST UV no P5P	Instrument ABC	62	62.69	62.85	64.81	Method	-0.20	-1.35%	12.22	-0.11
D Bilirubin	mg/dL	Other DBil	Instrument ABC	0.59	0.64	0.60	0.59	All Methods	-0.65	-7.13%	15.75	-0.45
T Bilirubin	mg/dL	Other TBil	Instrument ABC	1.13	1.15	1.18	1.14	All Methods	-0.13	-1.51%	24.68	-0.06
Calcium	mg/dL	Arsenazo	Instrument ABC	10.6	10.74	10.76	10.64	Method	-0.47	-1.49%	2.2	-0.68
Cholesterol	mg/dL	Cholesterol oxidase	Instrument ABC	95	93.70	93.70	93.00	Peer	0.56	2.15%	8.58	0.25
CK	U/L	NAC activated	Instrument ABC	105	106.69	106.68	104.97	Method	-0.39	-1.58%	20.58	-0.08
Creatinine	mg/dL	Jaffe kinetic	Instrument ABC	1.41	1.39	1.41	1.42	Method	0.07	0.34%	7.83	0.04
GGT	U/L	G-Glutamyl-carboxy-nitroanilide	Instrument ABC	68	64.90	65.03	68.60	Method	1.26	4.56%	18.25	0.25
Glucose	mg/dL	Hexokinase	Instrument ABC	112	118.25	117.07	116.00	Peer	-1.13	-3.45%	6.2	-0.56
HDL-C	mg/dL	Homogeneous	Instrument ABC	39.6	32.50	32.47	39.67	Method	2.57	21.95%	9.9	2.22

STATISTICAL EVALUATION: *No highlight (ACCEPTABLE): 2.0 or less*
Yellow highlight (WARNING) for SDI (or RMSDI): above 2.0 and below 3.0
Red highlight (ACTION NEEDED) for SDI (or RMSDI): 3.0 or more
▲ / ▼ Mark: SDI consistently above 2.0 (▲) or below -2.0 (▼) for the last 3 months
The selected comparator is underlined

****MEDICAL EVALUATION,*** *TEa% according to Biological variation – desirable (EFLM 2025):*

Report #
10-2610/1

1. **Analyte.** The analyte name, a link to its page.
2. **Unit, Method, Instrument.** The unit your result is shown in, and the method and instrument you entered for the round.
3. **Your Result.** Your result in that unit.
4. **Mean (All), (Method), (Peer).** The mean of all labs, of labs using your method, and of labs using your method and instrument. The mean your SDI is based on is underlined.
5. **Comparator.** The group your SDI and %Dev are based on: All Methods, Method or Peer.
6. **SDI.** (Your result minus the comparator mean) divided by the comparator SD. Yellow (WARNING) is above 2.0 and below 3.0 and red (ACTION NEEDED) is 3.0 or more. A red triangle ▲ or ▼ marks an SDI above 2.0 (▲), or below -2.0 (▼), for the last 3 rounds.
7. **% Dev.** Your difference from the comparator mean as a percentage of that mean.
8. **TEa% and %Dev/TEa.** TEa is the total error allowed for the analyte in the list you chose. %Dev/TEa is your %Dev divided by TEa: above 1 means your deviation is larger than the allowed error.

Below the table. The legend for the highlights and marks, the TEa list used (by default Biological variation, desirable, EFLM 2025) and the *Report #*.

Pages 3 to 24: one page per analyte (top half)

Who, what and how far from the group. Example: HDL-C

1	Lab #	Sample #	Date	Analyte	Method	Instrument
	10	2610	Oct-26	HDL-C	Homogeneous	Instrument ABC DEF

Comparator	Method	2 WARNING	4 Comparative Statistics				5 Your Deviation		
		N	Mean	SD	CV	U	SDI	%Dev	%Dev/TEa%
3 Lab result 39.6 mg/dL	*All Methods*	45	32.50	3.12	9.60%	1.16	2.28	21.85%	2.21
	Method	36	32.47	2.77	8.54%	1.16	2.57	21.95%	2.22
	Peer	4	39.67	1.30	3.27%	1.62	-0.06	-0.19%	-0.02

U = Expanded uncertainty (in mg/dL), coverage factor (k) = 2

TEa% (BV desirable) = **9.9** 6

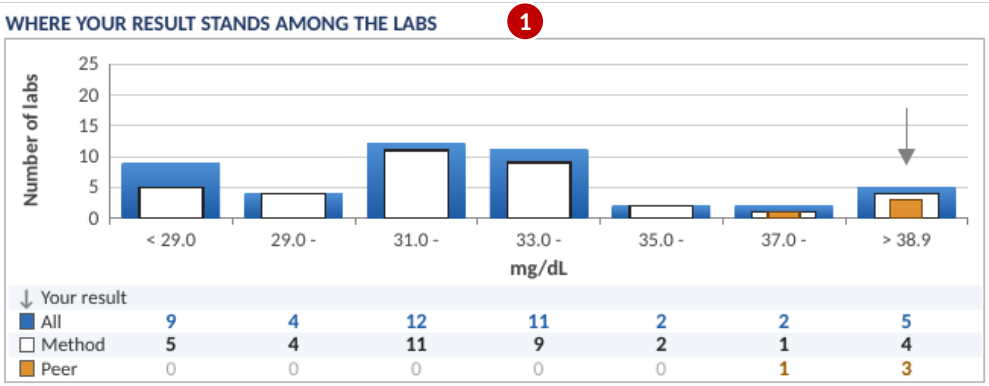
1. **Identification.** Lab number, sample, date, analyte, and the method and instrument you entered.
2. **Comparator and verdict.** The group your SDI is based on, and a pill with the verdict: **ACCEPTABLE** (green) when |SDI| is 2.0 or less, **WARNING** (yellow) above 2.0 and below 3.0, and **ACTION NEEDED** (red) at 3.0 or more. The report uses the Method group here because the Peer group had only 4 labs.
3. **Lab result.** Your result and the unit you chose.
4. **Comparative Statistics.** For All Methods, Method (your method) and Peer: **N** the number of labs, **Mean**, **SD** and **CV** of their results, and **U** the expanded uncertainty of the mean (coverage factor k = 2).
5. **Your Deviation.** Your **SDI** against each group, with yellow or red highlighting, your **%Dev**, and **%Dev/TEa%**. Here 2.57 and 2.28 are yellow (WARNING).
6. **TEa.** The total error allowed for the analyte in the list you chose, here 9.9% (BV desirable).

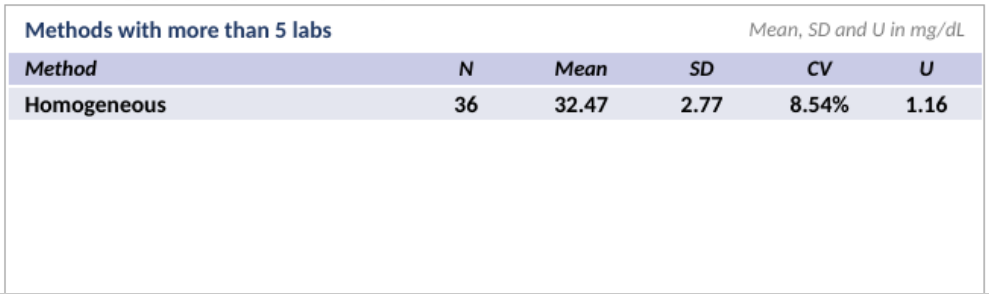
When a result is yellow or red: a suggested checklist

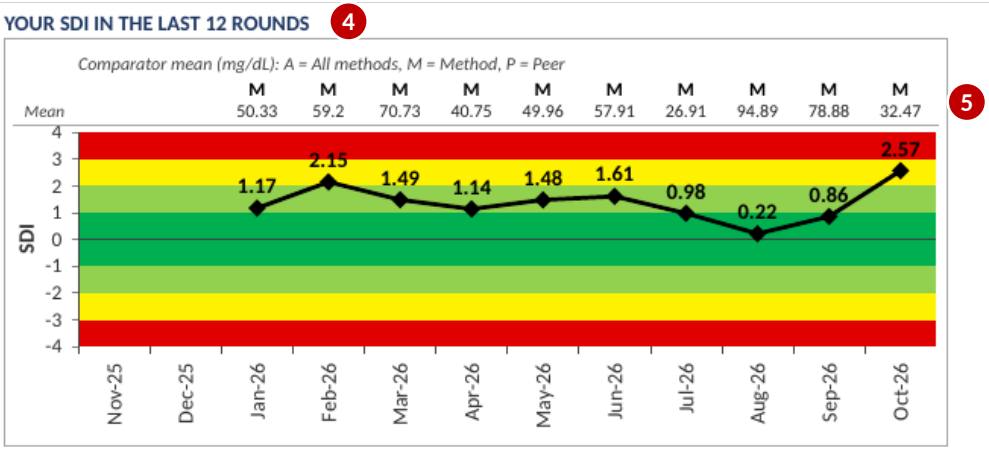
1. Check the entry: is the value, decimal point and unit the one you measured and entered? A slip here is the most common cause.
2. Check the method and instrument you entered. They decide the Method and Peer groups you are compared with.
3. Look at the Comparative Statistics: is your result close to the Method or Peer mean, even if far from All Methods? Then the difference may come from the method itself.
4. Review internal QC, calibration, reagent lots and how the sample was reconstituted, stored and handled.
5. Look at the SDI history (page 25) to see whether it is a one-off or a trend, and record any corrective action in your own quality system.

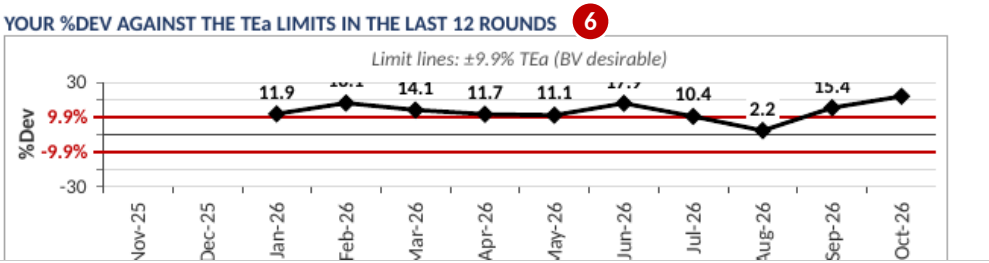
Pages 3 to 24: one page per analyte (charts)

Where your result stands, and how you performed over the last 12 rounds. Example: HDL-C





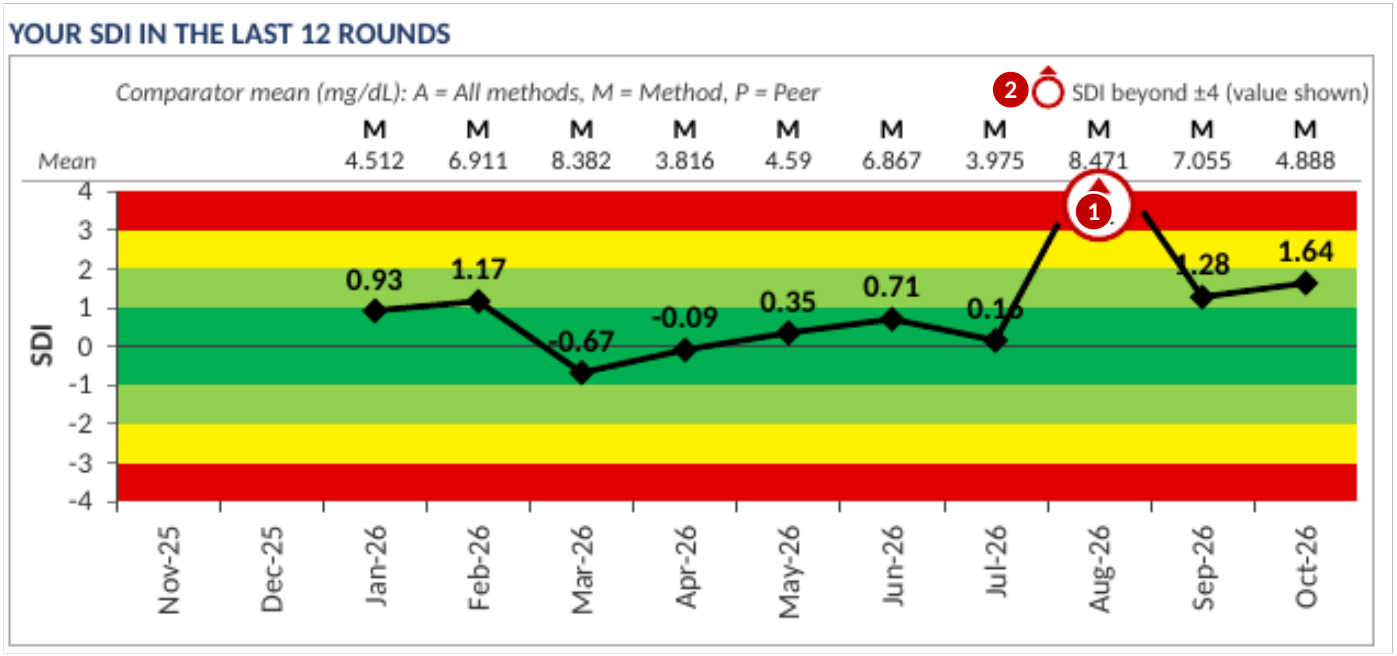




1. **Where your result stands among the labs.** A histogram of the results of the round. The grey arrow marks the bar your result falls in. Blue bars are all labs, white bars are labs with your method, orange bars are your peers.
2. **The counts under the histogram.** The number of labs in each bar for All, Method and Peer.
3. **Performance of participant methods.** Methods with more than 5 labs: N, mean, SD, CV and U, so you can see how other methods performed.
4. **Your SDI in the last 12 rounds.** Your SDI each round on a control chart, with the green, yellow and red bands for |SDI| 2.0 or less, above 2.0 and below 3.0, and 3.0 or more.
5. **A, M and P.** The letters above the chart show which comparator mean was used in each round: A = All methods, M = Method, P = Peer. The row below shows that mean. A circle with an arrow at the edge is an SDI beyond 4; the next page shows an example.
6. **Your %Dev against the TEa limits.** Your %Dev each round with red lines at plus and minus TEa, based on the TEa list you chose. Points inside the lines are within the allowable error.

An SDI beyond 4: the circle with an arrow

Example: phosphate, the SDI chart of the analyte page



1. **The circle with an arrow.** The chart shows SDI between -4 and +4. When a result is further away than 4 SDs, it cannot be drawn at its true height, so it is drawn at the edge of the chart as a circle with an arrow pointing the way, and the actual SDI is written inside (here 5.1 in August).

2. **The legend.** Top right of the chart: "SDI beyond ±4 (value shown)" shows the same symbol.

   A point beyond 4 is always in the red zone, so the verdict for that round is ACTION NEEDED. The line leaves the chart at the edge and returns when the SDI is back inside ±4.

Page 25: SDI history of the last 12 rounds

Every analyte, every round, on one page

Clinical Chemistry Monthly Program — Instrument ABC — DEF

1 — Lab # 10 — Example Laboratory

Sample #	*2511*	*2512*	*2601*	*2602*	*2603*	*2604*	*2605*	*2606*	*2607*	*2608*	*2609*	*2610*	*RMSDI*
Albumin			0.41	0.95	0.00	-0.06	0.07	0.70	-0.23	-0.27	0.25	0.51	**0.23**
ALP			0.44	-0.65	-0.58	-0.30		-0.84	-0.69	-0.36	-0.09	-0.23	**-0.37**
ALT			1.32	1.18	0.37	0.80	0.30	0.65	0.51	0.46	1.37	0.39	**0.74**
AST			0.83	0.91	0.43	0.93	-0.26	0.59	-0.10	-0.18	0.83	-0.20	**0.38**
D Bilirubin			-0.75	0.90	0.89	-1.18	-1.48	0.70	-0.86	-1.00	-0.24	-0.65	**-0.37**
T Bilirubin			0.43	1.09	0.94	0.25	0.20	0.74	-0.29	0.21	1.01	-0.13	**0.44**
Calcium			1.14	0.65	0.69	1.14	0.22	0.67	-0.14	-0.61	0.92	-0.47	**0.42**
Cholesterol			0.35	0.77	0.20	0.83	-0.33	1.03	1.18	-0.67	0.57	0.56	**0.45**
CK			0.46	0.29	-0.44	0.70	0.39	0.38	0.54	-0.99	-0.58	-0.39	**0.04**
Creatinine			1.45	1.12	0.94	0.07	0.69	1.21	-0.52	0.50	1.04	0.07	**0.66**
GGT			1.21	1.46	1.05	1.77	0.65	1.46	0.63	0.49	1.24	1.26	**1.12**
Glucose			0.35	-0.68	-0.87	-0.78	-0.51	-0.28	-0.68	-0.50	0.47	-1.13	**-0.46**
3 HDL-C			1.17	2.15	1.49	1.14	1.48	1.61	0.98	0.22	0.86	2.57	**1.37**
Iron			-0.05	0.31	-0.39	0.08	-0.21	0.08	-0.71	-0.52	0.13	-1.29	**-0.26**
LDH			0.99	-0.01	-0.54	-0.40	-0.22	-0.39	0.11	-0.43	0.90	0.44	**0.04**
Magnesium			1.53	1.59	0.90	0.36	0.13	1.15	0.01	-0.11	0.92	-0.51	**0.60**
Phosphate			0.93	1.17	-0.67	-0.09	0.35	0.71	0.16	5.12	1.28	1.64	**1.06**
Proteins, T			-0.93	-0.14	-0.55	-0.35	0.22	0.96	0.57	-0.71	-0.01	0.17	**-0.08**
TIBC			0.69	0.06	-1.11	-0.07	-0.98	-0.47		-0.73	-0.52	-0.54	**-0.41**
Triglyceride			0.44	1.00	-0.17	0.45	0.87	0.81	1.56	-0.44	0.59	0.63	**0.58**
Urea			0.90	0.49	-0.88	0.96	-0.47	-0.77	-0.05	-1.02	-0.51	-0.39	**-0.17**
Uric acid			0.30	0.39	-0.75	0.34	0.03	0.53	-0.30	-1.00	0.08	-0.20	**-0.06**
5 *Mean SDI*			***0.62***	***0.68***	***0.04***	***0.30***	***0.05***	***0.51***	***0.08***	***-0.12***	***0.48***	***0.10***	*0.27*

2 — RMSDI

4 — RMSDI

1. **Header.** Your lab number and laboratory name, the instrument and model.
2. **One column per round.** Your SDI each round, from the oldest to the newest. A blank cell means no SDI that round (no result, or a late result).
3. **Yellow and red cells.** An |SDI| above 2.0 and below 3.0 is yellow (WARNING) and 3.0 or more is red (ACTION NEEDED), as on the other pages.
4. **RMSDI.** The running mean SDI: the average of your SDIs over the last 12 rounds. It is highlighted yellow (above 2.0 and below 3.0) or red (3.0 or more), and shows a trend or bias that single rounds can hide.
5. **Mean SDI row.** The average SDI of all your analytes in that round. A highlighted value means a problem that affects the whole sample (for example storage, reconstitution or delay in analysis), rather than one analyte.

How performance is judged

Short rules; the full formulas are in Calculations Used

SDI (standard deviation index)

SDI = (your result − comparator mean) / comparator SD. It tells how many SDs you are from the mean of the group you are compared with. |SDI| 2.0 or less is Acceptable. Above 2.0 and below 3.0 is a Warning (yellow, take a look). 3.0 or more is Action needed (red, investigate). The colours follow the SDI before rounding, so a printed 2.00 or 3.00 can fall on either side of the boundary.

%Dev, TEa and %Dev/TEa

%Dev is your difference from the comparator mean as a percentage of that mean. TEa is the total error allowed for the analyte in the list you chose. %Dev/TEa above 1 means your deviation is larger than the allowed error, a hint that there is room to improve.

The marks

▲ / ▼ means your SDI was above 2.0 (▲) or below -2.0 (▼) for the last 3 rounds. U is the expanded uncertainty of the comparator mean, in the unit of the analyte (coverage factor 2).

The three comparators

All Methods: every lab. **Method:** labs using your method. **Peer:** labs using your method and instrument. The comparator the report used is underlined on the summary page and named (and grey highlighted) on each analyte page.

Performance over time (RMSDI)

The running mean SDI is the average of your SDIs over the last 12 rounds. 2.0 or less is Acceptable; above 2.0 and below 3.0 is a Warning (yellow); 3.0 or more is Action needed (red). A highlighted RMSDI suggests a trend and prompts action.

Results without an SDI

An SDI is only issued for results received before the sample close time.

Need help or want to ask a question? Log in at portal.eqadarts.org, open *Forms and Requests*, and use *Message to the Coordinator* (F02.P4.9) or the *Participants/Customers Complaint* form (F01.P5.8). Without a login, write to us at eqadarts.org/contact.

Related documents at eqadarts.org/downloads: End-of-Cycle Report Explained, Calculations Used, Guide for Labs and the Portal Guide.